

The Cosmographical Glass: Renaissance Diagrams of the Universe

S. K. Heninger, Jr./San Marino, Calif.: Huntington Library, 1977. Pp. xx+209.

The Cosmographical Glass derives its form from the Renaissance tradition of exposition to which S. K. Heninger, Jr., devotes it: the illustrated compendium of competing world pictures. More wide ranging than the original anthologists like Naiboda and Sherburne who only explained astronomical diagrams, Heninger provides the modern reader with illustrations from the Pythagorean-Platonic tradition and from such related systems as mythology, alchemy, astrology, and the cabala. With very few exceptions, Heninger's handsome choice of diagrams is well reproduced; careful planning has, moreover, ensured that the illustrations are embedded amid his clear and exhaustive commentaries. (This typographical success is partially impaired by the position of the footnotes at the back of the book; the reader still has to turn too many pages to find all the information he wants.) If Heninger's style occasionally becomes humdrum, this is a relatively small price to pay for the care and learning with which exploded cosmologies are rebuilt. Heninger recreates for us many of the perceptual and conceptual worlds of Renaissance man. He selects and explains folio plates from polymaths like Fludd, Riccioli, and Kircher; geometric diagrams from such scientists as Copernicus, Galileo, and Kepler; and the simpler but still, to a modern eye, enigmatic cuts from Bibles, popular encyclopedias, and handbooks.

Heninger's exposition quickens perceptibly when he conjoins literature and science. The theme of "all" and "nothing" in Shakespeare gains new life from Heninger's illustrations of cosmos, pan, and universe; Marvell's "jewel of the yearly Ring" shines with fresher luster after Heninger has reproduced the annual ring of Albertus Magnus and discussed its etymological union of *annus* and *annulus*. More than once Heninger rises to a scholar's "O altitudo" over the literary implications of Renaissance science: when, for example, he compares the "wondrous virtuosity" of his hero Robert Fludd with the "tedious and piecemeal process of observation" which he ascribes to Francis Bacon, and again during his fascinating commentary upon Tycho Brahe's mystical plan for the observatory at Uraniborg. Unfortunately, Heninger's prejudice against Bacon and his empirical allies, as well as his dissatisfaction with our own century and its historians of science, distort his cosmographical glass; at times this betrays his own cast of mind more accurately than it reflects that of Renaissance men.

In his preface, Heninger promises that his book is designed as a portfolio of illustrations rather than as a history of Renaissance cosmography or argument about it. Heninger concedes, nonetheless, that the book's last paragraph, in which he orchestrates the destruction of the old concepts of order, providence, and harmony by Descartes, Boyle, Locke, Newton, and the Royal Society, replicates what he believes to be the end of his favored era. This paragraph reveals more of Heninger's methodology than his disclaimer on the necessities of "rounding off" suggests. Integral to Heninger's recent books and essays has been a polemic against self-consuming artifacts and the scientific revolution which bequeathed them to us. In *Touches of Sweet Harmony* (1974)—so exciting, suggestive, and well documented that *The Cosmographical Glass* really serves as a pendant to

it—Heninger took issue with the subjectivism and empiricism of affective stylistics. Reader-response criticism might, so Heninger maintained, make some sense of seventeenth-century works that were themselves tainted by experimentalism, but it could not enhance our appreciation of the triumphal forms of late-sixteenth-century literature; the original majesty of these forms depended upon Renaissance man's perception of the integrity of natural science, literature, and moral philosophy. This account still forms the implicit argument of *The Cosmographical Glass* and is open to several objections.

In the first place, it is culturally and epistemologically "totalitarian." Although Heninger celebrates—in a healthy departure from the Tillyardians—the rich variety, even eccentricity, of cosmographical speculation during the Renaissance, he always emphasizes the necessary "fit" between a successful poetics and a geocentric or Pythagorean cosmology. (Luckily, this does not render him insensitive to the literary gifts of an empiricist like Galileo.) But did the Elizabethan poets have, as Heninger claims, such unswerving faith in the physical reality of this cosmology? To deny the importance of Neoplatonism for their poetry would require the perverse ingenuity of a Renaissance paradoxist. We must, however, be wary of taking Heninger's enticing but conceptually illicit shortcuts from cosmology to poems. For some poets, the belief in the intellectual and celestial worlds was a literary fiction—a very complex one to be sure—which sustained their literary productions in the sublunary world. The works of other poets (of the drab school, for example) and even those of Sir Edward Dyer, who was passionately interested in occult world systems, seem untouched by cosmological speculation. Hence, though cosmic harmony was a recurrent *theme* in Elizabethan literature, its exponents may have regarded it, with Sir Thomas Browne, as a thing delivered rhetorically and merely topical. Although Heninger mentions the period's skepticism about rival cosmologies, he cannot grasp the extent of that skepticism, either among the learned or among the unlettered.

In the second place, Heninger's model of Renaissance science can be misleading. The conceptual and the perceptual interacted in many ways that *The Cosmographical Glass* fails to consider. Although Heninger stresses the conservatism and mysticism which inspired the discoveries of Copernicus and Kepler, he seems unable to follow the scientific implications of mysticism as these were translated into the scientific revolution of the seventeenth century. Fludd's philosophy of circles, for example, found its experimental place in the *de motu cordis* of his friend William Harvey. Harvey allowed his observational findings to mature for nine years—as Horace had advised the poet to do—before he published them in triumphal form. Unveiling his discovery of the circulation at the midpoint of *de motu*, Harvey argues that the blood "moves in the same way as Aristotle says the air and the rain emulate the circular motion of the superior bodies." In this way, one of the greatest experimentalists of the Renaissance reconciles his scientific discoveries with the "meteorological precious stone" of Fludd, whose microcosmic analogies Heninger so lovingly traces. Unfortunately, Heninger does not include *homo harveius* in his collection of microcosmoi. This omission, one suspects, can be attributed to Harvey's conventional reputation as a reductionist and mechanist.

Heninger's other omissions and oversimplifications can only be mentioned.

His preference for the closed world over the infinite universe leads him to exclude Giordano Bruno from consideration. He does not realize that "Bacon's London"—a thought-world compared disparagingly with that of Fludd—was actually the work place of the Baconian *magus*, no less devout and God-fearing than the eccentric Rosicrucian. He cannot bring himself to admit that Boyle and Newton shared a deep belief in the providential design of creation and history or that the latter "thought Pythagoras's music of the spheres was intended to typify gravity" (Keynes MS 130). Newton believed that his recovery of the laws of universal gravitation represented the retuning, not the untuning, of the cosmos. Heninger's failure to grasp the complexity of this cosmographical enterprise is particularly disappointing; he mentions Newton's fascination with the German alchemist Michael Maier but still betrays the conventional Blakean dislike of the Arch-Geometer. In fact, what *The Cosmographical Glass* shows once again is the literary scholar's sentimental need to document a prelapsarian past within recorded history. Though notable for its learning, Heninger's attempt to harmonize Renaissance science, morality, and literature forms part of a familiar modern tradition. It is ironic that Martin Bateguin, in his own distinguished contribution to this tradition, has recently discovered the providence of wit in the eighteenth century from which, by Heninger's argument, it had just vanished.

Thus, Heninger fails to consider many of the historical complexities which might cloud his vision of the cosmographical glass. At the same time, hoping to disturb those readers who have too simple a faith in scientific progress, he delights in certain paradoxes—for example, Copernicus's hermeticism and Kepler's occultism. But Heninger ignores those distinguished scholars, like Allen Debus, B. J. T. Dobbs, James and Margaret Jacob, J. E. McGuire, and P. M. Rattansi, who have also cleared many of the strange paths along which Renaissance cosmographers moved from the arcane to the empirical and back. Heninger fails, moreover, to supplement his scrupulous attention to Renaissance texts with any mention of the recent scholarship on them. Both omissions will prove distressing for those among his literary audience who want to be brought up to date with the history of science. Thus, Heninger tells us in his footnotes where we can find yet another of Fludd's sephirotic trees or locate further examples of the Platonic *lamda* in Macrobius, Chalcidius, and Giorgi. But he does not provide the references—more accessible and useful for most of his readers—which would send us to François Secret for the Christian cabala, to John Warwick Montgomery for Rosicrucianism, to H. M. E. de Jong for a facsimile edition of Maier's *Atalanta fugiens* that also provides a translation and an elaborate commentary, or even to Alexandre Koyré for the astronomical revolution. There is no reference to R. J. W. Evans's splendid study of European cosmography, occultism, art, and literature during the Late Renaissance; thereby, Heninger loses the opportunity of tying together the careers of Dee, Dyer, Kepler, and Brahe in Rudolf II's Prague, a city he mentions all too matter-of-factly. It is disappointing to be directed to Carl Jung's ahistorical *Psychology and Alchemy* (1952) and to John Read's old-fashioned *Prelude to Alchemy* (1936) for the field of Renaissance alchemy which has been so richly plowed of late. Since Heninger wants to provide a student's *vade mecum* to Renaissance cosmography, he should tell the student which recent authorities can most profitably be visited.

Although the intellectual achievement of *The Cosmographical Glass* is less striking than its typographical beauty, Heninger has made a valuable addition to our shelf of works on Renaissance cosmography. Like the historians of science whom he does not mention, Heninger has dedicated himself to the serious reappraisal of those world views which did not survive the scientific revolution or only lived on peripherally among eccentrics like the Swedenborgians. His diligent unfolding of Renaissance diagrams of the universe will prove indispensable for the many students of literature who live far away from research libraries or whose Latin is rusty and whose knowledge of cosmic symbolism is limited. *The Cosmographical Glass* fully deserves a paperback edition, like Wayne Shumaker's *Occult Sciences in the Renaissance*, but an edition which, one hopes, Heninger could rework into a more reliable and comprehensive guide.

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Alexander Pope's 'Opus Magnum' 1729–1744

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Modest in design and accomplishment, Miriam Leranbaum's *Alexander Pope's 'Opus Magnum' 1729–1744* may yet prove epochal in the study of Pope. The conventional wisdom, founded alike in Pope's methods of composition, in his failures of sustained logic, and in his twentieth-century revival in a critical climate hostile to system building, has been that Pope is at his best when least systematic. Maynard Mack, whose Twickenham introduction is still our most valuable discussion of *An Essay on Man*, maintains that Pope's outlook "involved eschewing on the whole the *thèse* and the *système*, cherishing the *ad hoc*, recognizing the flux, variety, and disorderliness of experience" (*The Garden and the City* [1969], p. 204). Reuben Brower treats the *Essay* as little more than a developmental stage in Pope's progressive *Imitatio Horatii*, finding that it only "succeeds because he did not write the poem he seems to have thought he was writing, at least in moments when he was discussing his grandiose project with Bolingbroke or Spence" (*Alexander Pope: The Poetry of Allusion* [1959], p. 212). Such readings render *An Essay on Man* a white elephant, begotten or misbegotten through conditions (Pope's weariness with the *Dunciad* wars, Bolingbroke's unnatural influence) foreign to Pope's genius. And more recent studies, such as Martin Kallich's *Heav'n's First Law* (1967) and Douglas H. White's *Pope and the Context of Controversy* (1970), while identifying Pope's rhetorical skills and locating his ideas in the debates of his time, cannot finally explain why such an unsystematic mind should stake its claim to poetic immortality on an attempt at system. Now Leranbaum's book raises the possibility that we have been asking the wrong questions all along, that *An Essay on Man*, the *Moral Essays*, and even parts of the fourth *Dunciad* were conditioned by Pope's continuing interest in system as embodied in his changing plans for "my *Opus Magnum*." As Leranbaum puts it, with characteristic modesty, "one may be temperamentally 'disorderly' yet admire and strive to imitate those who are systematic and orderly; one may be flexible and respon-